NOAA Science On a Sphere 5.0.0+ Release Notes

Last modified on Feb. 9, 2017

Table of Contents

For detailed information on using any of SOS's features, please refer to the SOS User Manual (also located at: SOS website > Support tab > Manuals menu > Users Guide menu item).

Release Dates

SOS 5.0.0 – Released November 19, 2015

Requirements

- SOS 5.0.0+ requires **Ubuntu 12.04.5 LTS**.
- **Do NOT upgrade your SOS computer to Ubuntu 14.04 LTS, even if prompted. The SOS software will not work.**
- If your current SOS software version is **less than 4.1**, please read the **Important Note** at the top of the 4.1+ Release Notes page, as your SOS computer may require configuration by the SOS team in order to proceed further.

Backward Compatibility

SOS 5.0.0+ is only partially compatible with the SOS Remote App 4.3.0+, so we **strongly recommend** that when upgrading to SOS 5.0.0+ that you also upgrade the SOS Remote App on the iPad to SOS 5.0.0+ **at the same time**. These are the known compatibility issues:

- Using the new iPad 5.0 with SOS & Data Catalog 4.3: Dataset variations (such as Blue Marble with audio) are not displayed in the Data Catalog. However, they can still be displayed on the sphere if they are already in presentation playlists.
- Using the iPad 4.3 with the new SOS & Data Catalog 5.0: Transferring the Data Catalog from the SOS machine to the iPad may time out and not complete. This prevents any new updates to the Data Catalog from loading onto the iPad. However, the iPad can still display presentation playlists on the sphere.

New Products

- **NOAA SOS Public Kiosk**

The NOAA SOS Public Kiosk ("NOAA Kiosk") software, is a new product beginning with the SOS 5.0 release. It provides a touch screen controller intended for a general public audience to interact with a Science On a Sphere® (SOS) exhibit when there is no docent present. The NOAA Kiosk provides a flexible and easy to administer public controller that can be localized to native languages by using standard SOS playlists. The NOAA Kiosk runs on Microsoft Windows, but was designed to be able to portable to other types of computers such as Linux and Mac OSX (should there be sufficient demand for those platforms). The NOAA Kiosk is fully supported as part of the normal SOS assistance provided at sos.gsd@noaa.gov. Suggestions for new features and submissions of bug reports are highly encouraged.

The NOAA Kiosk, including installation, setup, and usage, is described in a new manual called **NOAA SOS Public Kiosk**.

- **Visual Playlist Editor**

The Visual Playlist Editor is a new interactive playlist editor that visually lays out, modifies, and previews SOS dataset content. It is being released with SOS 5.0 as a "preview edition" to provide the SOS community an early look at what is planned to be a replacement for the existing playlist editor and it

represents a major advance in how SOS content and presentations will be created and augmented. We encourage you to try it out and send us your suggestions and bug reports.

The Visual Playlist Editor will be described in a new manual under development called Visual Playlist Editor - Preview Edition.

New Features

- **Interactive Splitter**

The Splitter Tool is an interactive feature for use during presentations. The Splitter can partition an SOS dataset into up to four slices that are replicas of the slice of data currently being displayed on the sphere at the center of the User Position (the red dot). This feature is especially useful for presenting to large groups of people located all around the sphere. Using the Splitter, the presenter does not have to rotate the data and repeat an explanation about an area of interest multiple times.

Note: In this version of the Splitter, the annotation features (drawing, pointing, icons) are not repeated on each slice.

Note: The Splitter Tool works with both animations and still images, but rotation can be jittery when there are more than two slices displayed.

Note: You must have NVIDIA driver version 331 or above installed on your SOS computer. If you are seeing white or black slices when you try to use the Splitter, it is likely that your SOS computer does not have the correct driver version. Please contact the SOS Customer Support Team for assistance.

- **Language Translation Support**

Beginning with the 5.0 release, multi-language support is available in the SOS software. The SOS Remote App and the new NOAA SOS Public Kiosk are the first applications to include localized user interfaces, which includes dynamic translation of text in labels, buttons, and dialog boxes to a native language. The SOS Data Catalog also now supports localization of dataset names and descriptions, major and sub categories, and keywords, including language variations in different countries. Going forward, other SOS software will build upon this foundation.

In most cases, NOAA will not be creating localizations for SOS, but will rely on others such as SOS distributors, content creators, and sites where English is not the primary language to create translations in their preferred languages. NOAA will readily share high quality contributed SOS translations in different languages for the benefit of the entire SOS community.

SOS localization, including the steps needed to create and deploy translations, is described in a new manual called **SOS Translations Guide**.

- **4K Projector Support**

Availability of 4K projectors at an affordable price is now becoming feasible for SOS installations. 4K projectors have 4 times the resolution of the current projectors used at most sites and offers significantly enhanced image quality on the sphere. This improvement is noticeable on datasets that have a resolution of 4096x2048 or greater and is even more dramatic for higher resolution datasets, particularly when viewed using the zoom magnifier.

The SOS 5.0 release has been tested with 4K projectors and new graphics cards that are required to drive them and fully supports their operation. We are ready to work with any site that wants to upgrade to a state-of-the-art 4K SOS system. To discuss the hardward and other requirements for 4K SOS, contact us at sos.gsd@noaa.gov.

Enhancements

- **Automated Alignment (Experimental Version)**

Auto Alignment has been improved since its initial release in SOS version 4.3. It is now able to use much more sophisticated cameras that capture higher resolution images to produce more accurate alignments. It is also more tolerant of differences in color and ambient lighting than before. For updated hardware requirements, please contact us at: sos.gsd@noaa.gov.

For more detailed information and requirements, please see the Automated Alignment section in the Projector Alignment for SOS Using the iPad Manual (also located at: SOS website > Support tab > Manuals menu > Alignment - iPad menu item).

- **Data Catalog Support for Site Custom Datasets**

The previous SOS 4.3 release introduced the SOS Data Catalog and the ability to import datasets residing under the site-custom directory using the Update Library feature in the SOS Stream GUI. For the 5.0 release, the functionality of site-custom data import has been improved. One of the main changes is that site-custom datasets derived from NOAA datasets using a playlist.sos file will be added as regular datasets instead of as dataset variations. This makes them easier to find using the iPad's Data Catalog browse and search functionality. Site custom datasets also now use the new description playlist keyword that will appear in the Data Info pane on the iPad.

- **SphereCasting Software Upgrades**

The SOS SphereCasting software infrastructure has been upgraded to use much newer versions of the underlying libraries (OpenFire server and Smack client). Due to incompatibilities between the old and new versions of these libraries, any SOS system that will be hosting a SphereCast will need to be running SOS 5.0. SOS systems running 4.3 will still be able to view SphereCasts.

frink.fsl.noaa.gov**,** the NOAA server used for many years to support SphereCasting was shut down and a replacement server, ato-webprod.gsd.esrl.noaa.gov, is now in place. Due to heightened government security restrictions, the new server is yet not ready to accept public connections. We will remedy this as soon as possible, but **for now NOAA will not be able to conduct any SphereCasts.** We will make an announcement when SphereCasting becomes available again and thank you for your patience.

New Playlist Keywords

Please see the Playlist Format Reference – Version 5.0.0+ for detailed information on all of the SOS dataset playlist keywords. (This page can also be accessed at: ***SOS website > Support tab > Manuals menu > Playlist Format Reference menu item****)*

- **description** = {{ text }}
  Text that describes this dataset, used to supply information in the media library for dataset playlists placed in the /shared/sos/media/site-custom folder. The text must be enclosed between the special characters "{{" at the beginning and "}}" at the end and may span multiple lines in the playlist file. Special characters including single and double quotes are allowed as part of the text.

  If this keyword is missing, by default the SOS software will assign site-custom datasets a description value the same as its name value. Ignored by SOS software for NOAA-managed playlists.

- **framewidth** = size in pixels of the data or first layerdata image or movie frame in the lateral

direction
Default is 0. SOS datasets are always rectangular with a 2:1 size ratio and this value is the larger of the two dimensions. It is used to indicate the resolution of the dataset, which is used primarily to indicate a dataset that has a very high resolution, i.e., greater than 4096 x 2048. For tips on how to find the value for framewidth, see the Helpful Hints document.

New Automation Control Commands

*Please see the Automation Commands Reference – Version 5.0.0+ for detailed information on all of the SOS Automation Control commands. (This page can also be accessed at: **SOS website > Support tab > Manuals menu > Automation Control Protocol menu item**).*

- **splitter** help|info|subcommands
  The splitter command controls an interactive feature to split the sphere into 2-4 sections and replicate features of interest for viewing from all sides of the room. Here's a synopsis of the functionality, as given by the automation command **splitter** help:

```
Usage:
splitter help
splitter info
splitter subcommands
where
subcommands is a list of one or more of the following:
on
off
latlon [float,float]
slices [int]
write
```

Bug Fixes

INSTALLATION

- Fixed an issue where second hard drive was not mounted correctly on some machines
- Changed the Java installation to use JRE 1.7 to support upgrades to libraries underlying SphereCasting

SOS STREAM GUI

- Revised the menu options under File menu, including adding an option to download all missing datasets
- Cleaned up Update Library to create only the Major Category entries along with *all* and *overlays*

UTILITIES

- Added a button to the Utilities UI for auto-alignment
- Fixed permission issues for the sosdemo user when updating the data catalog

AUTOMATED ALIGNMENT

- Added a button to the Utilities UI for auto-alignment
- Fixed installation issues affecting the setup of auto alignment